

State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 4104(c)-04
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California Type Evaluation Program
Certificate of Approval
for Weighing and Measuring Devices

For:

Healy Phase II Vapor Recovery
Gasoline Nozzle (Assist)

Models: 600, 600 ORVR, 800 ORVR, and 900

Submitted by:

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Standard Features and Options

Models 600, 600 ORVR, 800 ORVR, and 900 Vapor Recovery Nozzle:

Automatic, self closing, gasoline dispensing nozzle equipped with special features for vapor recovery in vehicles which may or may not contain onboard refueling vapor recovery (ORVR) equipment.

- Nozzle is semi bootless with flexible vapor guard
- Nozzle is equipped with a primary liquid and a no fuel pressure/no flow shut-off mechanism
- Nozzle is coaxial

Central Vacuum Pump Options: (see Operation on Page 2)

- Model 9000 mini-jet (aspirator)
- Model 2000 vacuum blower
- Model VP500 vane pump

Distributed Vacuum Pump Option: (Dispenser Mounted)

- Model VP1000

NOTE: A central vacuum pumping system may utilize a Healy Model 6280 monitoring system.

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable technical requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: December 31, 2004



Mike Cleary, Director

Healy Systems, Inc.
Healy Phase II Vapor Recovery
Gasoline Nozzle (Assist)
Models: 600, 600 ORVR, 800 ORVR, and 900

Application:

- Gasoline dispensing facilities where vapor recovery is required. Approved for use on the Healy vapor recovery system.
- Approved for gasoline and blends of gasoline/ethanol.
- Approved for use with Phase II vapor recovery equipment when the systems and components are CARB certified, and the dispensers comply with zero-set-back interlock requirements.

Identification: The model number is cast into the right side of the nozzle handle. The manufacturer's name is cast into the left side of the handle. The serial number is stamped on the body of the nozzle on the right side under the scuff guard or on the underside of the nozzle casting in the handle area. The Model 600 may be reworked to add the ORVR section.

Sealing: No sealing mechanism is required. The nozzle is subordinate to the measurement accuracy system.

Operation: The Models 600, 600 ORVR, 800 ORVR, and 900 are designed to be used with the Model 9000 mini-jet, Model VP500 vane pump, Model VP1000 vane pump, or model 2000 vacuum blower.

STANDARD FEATURES	PUMP MODEL			
	9000	2000	VP500	VP1000
Number of multi-product dispensers serviced	4	8	6	1
Operating level inches of water column	65-90	65-90	65-90	N/A
Vapor return line size	2"-3"	2"-3"	2"-3"	2"-3"
Installation underground	Yes	No	Yes	No
Installation aboveground	No	Yes	Yes	Yes

Test Conditions: This certificate supersedes Certificate of Approval Number 4104(b)-99 and is issued to add the Healy Model 900 nozzle. Six Healy Model 900 nozzles were installed at a field test site as part of a Healy Systems, Inc. Phase II EVR system. Tests of the primary shut-off mechanism were performed on each nozzle. Additionally, refueling operations were tested on 150 vehicles with no diversion of measured liquid. The previous test conditions are repeated below for reference.

Certificate of Approval Number 4104(b)-99: This certificate superseded Certificate of Approval Number 4104(a)-94 and was issued to add the Healy Model 800 ORVR, with the ORVR section cast in the nozzle. Six Healy Model 800ORVR nozzles were tested with a VP1000 vane pump (Certificate of Approval Number 4570-97). Tests of the primary shut-off mechanism were performed on each nozzle. Additionally, refueling operations were tested on 150 vehicles with no diversion of measured liquid.

Certificate of Approval Number 4104(a)-94: This certificate superseded Certificate of Approval Number 4104-94 and was issued to add the Healy Model 6169 vacuum monitor indicator and associated pressure switch, Model 93928 (1950P-2). The approval was granted based upon written information supplied by Healy Systems, Inc.

Certificate of Approval Number 4104-94: Six Healy Model 600 nozzles, a Model 9000 mini-jet, a Model VP500 vane pump, and a Model 2000 vacuum blower were installed at a field test location. Tests of the primary and secondary shut-off mechanisms were performed on each nozzle. Additionally, refueling operations were observed on 150 vehicles with no diversion of measured liquid.

Results of the evaluation indicate the devices comply with applicable requirements.

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2004 Edition

Tested By: Tom Michel (4104-94), Gary Castro (4104(a)-94), Norman Ingram (4104(b)-99), and Joe Raspino (4104(c)-04)